

TITLE OF INVENTION

The title of the invention is a dumb waiter elevating and lowering platform device. The inventor is Wayne M. Slagle, 1228 N.E. 193rd Ave, Portland, Oregon, 97230 and a citizen of the United States of America.

CROSS-REFERENCE TO RELATED APPLICATIONS

^{182-2.8}
5,465,808 Nov., 1995 Musgrove 182/2

An elevating system elevates a payload platform between a first position and a second position, such elevating system having a stowed position, an operational position, and a fully deployed position.

¹⁸²⁻¹⁴²
5,667,035 Sept., 1997 Huges 182/142

An overhead platform elevating device for moving objects between a lower level of a building and an overhead storage space is provided including a rectangular platform having a base plate and a centrally disposed supporting surface, a motor assembly, opposed pulley assemblies, a plurality of platform adjustment cables, drive cables and telescoping stabilization members.

¹⁸⁷⁻²⁷²
2,996,151 Olson 187/272, 336, 342
Dumb Waiter lifting platform

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable

REFERENCE TO A MICROFICHE APPENDIX

Not applicable

BACKGROUND OF THE INVENTION

The first dumbwaiters were screw drive. The current winding drum is the most popular type of drive, consisting of a drive motor connected to a gear reducer by either direct drive or V- belts. The drum winds a cable to raise the load and several limit switches are used to set the travel limits. A disc brake is used to lock and hold the input or output shafts. The drive mechanism normally mounts below the platform, limiting the lower travel unless the drive is located below ground. Also, the platform car is usually

made of sheet metal which allows any spilled materials to leak down the wall, inside the hoistway. Some systems allow for mechanical operation y/ pulling on a rope that , through a set of pulleys on a common shaft, raises or lowers the platform car connected to a rope.

BRIEF SUMMARY OF INVENTION

An elevating system that moves a payload container or platform from one elevation to another. Such an elevating system allows the platform to stop at pre-determined positions as needed between floors of a building or residences by depressing a "raise", "lower" or "stop" switch. A remote control module permits operation from a location within visual sight of the switch. The lift mechanism is comprised of a low profile torque motor integral to the rotating cylinder that wraps a cable, which through a system of pulleys, raises the payload. The low profile motor allows the payload to lower to a ground position without a hole below ground for the motor and is mounted to the bottom of the tower. The payload is lowered by reversing the rotation of the motor with gravity acting on the payload. The motor incorporates an integral electromagnetic brake. Also incorporated into the low profile motor is a rotary counter that sets the stop locations of the platform without the use of limit switches in the hoist way. The container is a single piece, made of roll molded plastic. A lip surrounds the front opening and prevents spills from exiting the container and dripping down the inside walls of the hoist way.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING
None enclosed

DETAILED DESCRIPTION OF THE INVENTION

The high torque, low profile motor assembly, item 1, mounts to the base of the tower, item 4 , The motor drive contains two 2" radius sheaves , items 11, that wrap the cable, items 3, that is connected through a pulley system, item 2, that is mounted to the uppermost portion of the tower. The pulley assembly is mounted in such a way as to allow for slight changes in cable length due to cable extension or winding problems from side to side. Coarse adjustment is provided by turnbuckles, items 12, at the platform connection, item 5